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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,175	09/12/2003	Clarence E. Thomas	068062.0168	7513
31625	7590 11/28/2007		EXAMINER	
BAKER BOTTS L.L.P. PATENT DEPARTMENT			LEE, HWA S	
	JACINTO BLVD., SUITE 1500 N, TX 78701-4039		ART UNIT	PAPER NUMBER
AUSTIN, TA	78701-4039		2886	
			MAIL DATE	DELIVERY MODE
			11/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Diffice Action Summary    ThoMAS ET AL.   Examiner   And we Hwa S. Lee   Art Unit   2886		Application No.	Applicant(s)					
Andrew Hwa S. Lee  Andrew Hwa S.								
- The MALING DATE of this communication appears on the cover sheet with the correspondence address - Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  Estentions for me ray be evaluate under the provious of 37 CFR 11-306, in no event, nower, may a reply be threy fitted.  If NO period for reply is appelled above, the maximum statutory paned will apply and will expire SN, (6) MONTH'S from the malling date of this communication.  Feature to reply within the stor centered period for reply will, y statutise, center the applicance in CS 19 St. 2, 6, 133, Any reply receives by the Office last make mise motions after the malling date of this communication, even if timely filled, may reduce any starting plant them applicants. Set 7 CFR 1,7-807.  Status  1) □ Responsive to communication(s) filled on 66 September 2007.  2a) □ This action is FINAL.  2b) □ This action is non-final.  3) □ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex partie Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) □ Claim(s) 1-8,10-12.33 and 34 is/are pending in the application.  4a) Of the above claim(s) is/are allowed.  5b □ Claim(s) is/are allowed.  5c □ Claim(s	Office Action Summary	Examiner	Art Unit					
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A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  Caretinous of the may be gwiseled under the provision of 37 CPT 1300, in no event, however, may a reply be simaly flied.  If NO period for regiv is specified above, the maximum statutory period will apply and will expre SN, (6) MONTHS from the mailing date of this communication.  Failur to regive with this set or exembed period for regive is specified above, the maximum statutory period will apply and will expre SN, (6) MONTHS from the mailing date of this communication.  Failur to regive with the set or exembed period for regive is specified above, the maximum statutory period will apply and will expre SN, (6) MONTHS from the mailing date of this communication.  Failur to regive yield the set of exemption of the set of this communication, even if timely filled, may reduce any semingland the mailing date of this communication, even if timely filled, may reduce any semingland the mailing date of this communication, even if timely filled, may reduce any semingland the mailing date of this communication, even if timely filled, may reduce any semingland the mailing date of this communication, even if timely filled, may reduce any semingland the mailing date of this communication.  Status  1) Responsive to communication (s) filled on <u>0.8 September 2007.</u> 2a) This action is FINAL.  2b) This action is non-final.  3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quay/e, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) Claim(s) <u>1-8.10-12.33 and 34</u> is/are repetited on the application.  4) Claim(s) <u>1-8.10-12.33 and 34</u> is/are rejected.  7) Claim(s) <u>1-8.10-12.33 and 34</u> is/are rejected.  7) Claim(s) <u>1-8.10-12.33 and 34</u> is/are rejected to by the Examiner.  Application Papers  9) The specification is objected to by the Examiner.  10) The act		ears on the cover sheet with the c	correspondence address					
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  Extensions of time may be evaluate under the provious of 37 FR1 1306, in no event, however, may a reply be timely flied after 50X (6) MORTHS from the mailing date of this communication of 37 FR1 1306, in no event, however, may a reply be terminally date of this communication of 37 FR1 1306 page, with the safe or control of the communication of 37 FR1 1306 page, within the safe or control depends on the communication, even if timely field, may reduce any searce plasme the adjustment. See 37 CFR 1.704(e).  Status  1) Responsive to communication(s) filled on 06 September 2007.  2a) This action is FINAL.  2b) This action is non-final.  3Disposition of Claims  4(a) Claim(s) 1.8.10-12.33 and 34 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5b) Claim(s) 1.8.10-12.33 and 34 is/are rejected.  7c) Claim(s) 1.8.10-12.33 and 34 is/are rejected.  7c) Claim(s) 1.8.10-12.33 and 34 is/are rejected.  7d) The drawing(s) filled on is/are subject to restriction and/or election requirement.  Application Papers  9) The specification is objected to by the Examiner.  10) The drawing(s) filled on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) be decided rewing(s) to decided to fill drawing(s) to decided rewing(s) to decided to fill drawing(s) to decided rewing(s) to decided to fill drawing(s) to decided rewing(s) to decided t	• •							
1)	<ul> <li>WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.</li> <li>Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any</li> </ul>							
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Application/Control Number: 10/661,175

Art Unit: 2886

### **DETAILED ACTION**

## Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 1-8, 10-12, 33, and 34, are rejected under 35 U.S.C. 103(a) as being unpatentable over Medford et al (US 6,608,717).

For claims 1 and 8, Medford et al (Medford hereinafter) show a optical coherence microscope apparatus and method comprising:

an illumination lens operable to focus a reference beam;

a beam splitter (2x2 coupler) optically coupled to the illumination lens by the reference beam; and

a reference mirror (1-D scanning mirror) located at a waist of the reference beam and configured such that the reference beam is reflected from the reference mirror to the beam splitter.

Although Medford may not <u>expressly</u> state the functional use of the elements, such as the use of word "operable", a recitation of the intended use of the claimed invention must result in a <u>structural difference</u> between the claimed invention and the prior art in order to patentably

Art Unit: 2886

distinguish the claimed invention from the prior art. As presently claimed, there is no structural difference.

With regards to the limitation "to eliminate the need for a reference objective on a reference arm," that limitation does not further define the <u>structure</u> of the holography system. In addition the <u>intention</u> of using a reference mirror to eliminate the need for a reference objective does not further define the <u>structure</u> of the system. Medford shows a structure of an illumination lens, a beam splitter, and a reference mirror located at a waist of the reference beam and configured such that the reference beam is reflected from the reference mirror to the beam splitter.

With regards to the method claim 8, "eliminating the need for..." only states the <u>purpose</u> or the <u>capability</u> of the reference mirror which is not a <u>step</u>. Therefore, there is no difference to the <u>steps</u> of the method claim. Medford shows the step of focusing a reference beam with an illumination lens, the step of transmitting at least a portion of the reference beam though a beam splitter, and the step of reflecting the portion of the reference beam.

With regards to claim 2, Medford shows the apparatus configured with optical fibers and does not expressly show the use of a cube beam splitter. Official Notice is taken that cube beam splitters are well known in the art and at the time of the invention one of ordinary skill in the art would have used a cube beam splitter since it is well known to arrange interferometers in either an optical fiber arrangement or a bulk optical element arrangement. Since a cube beam splitter is a well known bulk optical element for splitting a beam, the skilled artisan would have used a cube beamsplitter in the bulk optical arrangement.

Art Unit: 2886

With respect to claims 4 and 12, the beams are Gaussian (column 7, lines 12+).

With regards to claim 5, Medford shows the reference mirror comprises a flat mirror (e.g. see Figure 10).

With regards to claims 6 and 11, Medford shows the reference mirror operable to maintain optical symmetry of a reference arm and a target arm (column 7, line 39).

With regards to claims 7 and 10, the reference mirror would be inherently operable to form a first wavefront substantially similar to a second wavefront formed by the reference objective.

With respect to claim 33, the claim does not further limit claim 8 drawn to a method by reciting a <u>step</u> or manipulatively further defining a previously recited step. The claim merely recites a capability ("operable to") of the reference mirror, and thus Medford meets the limitation of claim 33.

With respect to claim 34, the claim does not further limit claim 8, which is drawn to a method, by reciting a <u>step</u> or manipulatively further defining a previously recited step. The claim merely recites the structure of the reference mirror, and thus Medford meets the limitation of claim 34.

## Response to Arguments

3. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

#### Conclusion

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa S. Lee whose telephone number is 571-272-2419. The examiner can normally be reached on Tue-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur R. Chowdhury can be reached on 571-272-2800. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/661,175

Art Unit: 2886

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <a href="http://pair-direct.uspto.gov">http://pair-direct.uspto.gov</a>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrew Hwa S. Lee Primary Examiner Art Unit 2886 Page 6